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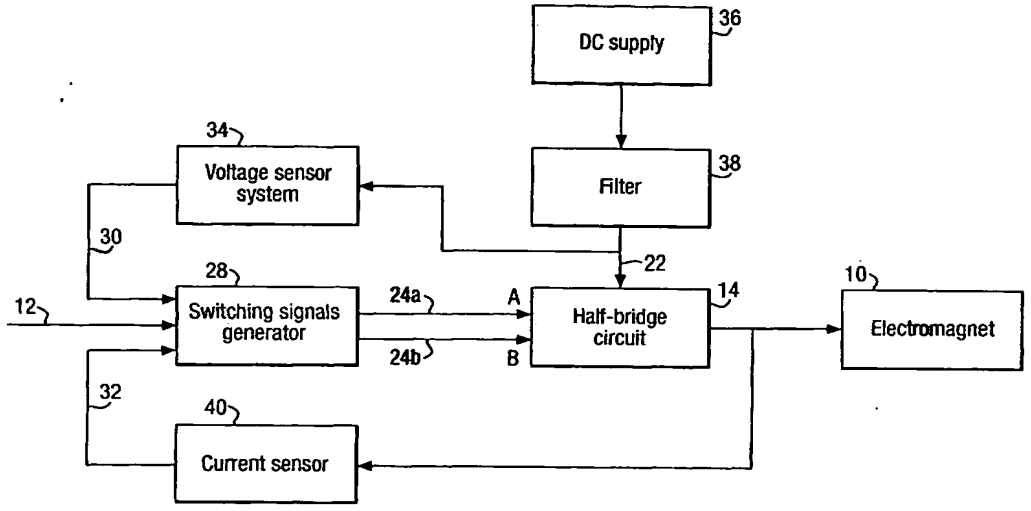
(54) Title: IMPROVEMENTS RELATING TO OPERATION OF A CURRENT CONTROLLER



(57) Abstract: This invention relates to a method of operating a bridge circuit comprising an input that receives a DC signal of voltage $+V_s$, an output having an electromagnet connected thereacross, first and second arms having first and second switches respectively and being connected to opposed ends of the electromagnet. The method comprises the steps of receiving a voltage demand signal indicative of a desired voltage to be supplied to the electromagnet in a period and generating first and second switching signals with reference to the voltage demand signal. The first and second switching signals are then applied to the first and second switches respectively during the period thereby causing the switches to switch between on and off states to produce voltages across the electromagnet pulsed at levels of $+V_s$, OV and $-V_s$, such that the average voltage across the electromagnet during the period is substantially equal to the desired voltage.